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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,304	12/06/1999	SHIRO FUJIEDA	K0600.0208/P	9790
24998	7590	11/01/2005	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			AHMED, SAMIR ANWAR	
2101 L Street, NW			ART UNIT	
Washington, DC 20037			PAPER NUMBER	

2623

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/445,304	Applicant(s) FUJIEDA, SHIRO	
	Examiner Samir A. Ahmed	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 and 48-60 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-42, and 48-60 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The amendment filed 8/08/05 have been entered and made of record.
2. US patent 6,154,566 has foreign priority to JP application 8-120278, which is published as JP 09-054828. That US patent is considered as an official English translation of JP 09-054828 and the Examiner will refer in the arguments section to columns and lines in that US Patent for easy reference.
3. Applicant's arguments filed 8/08/05 have been fully considered but they are not persuasive for the following reasons:

Applicant alleges, " Mine et al. does not teach or suggest [,]" (page 15, line 18–page 16, line 24). The Examiner disagrees. Firstly, Mine et al. discloses producing edge magnitude of an image (col. 6, lines 19-20), the edge is a line segment and the edge magnitude of an image is a line segment image data. Secondly, the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exist, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3 pixels (col. 8, lines 27-29), i.e., Mine clearly discloses, producing a line segment image data (edge magnitude and direction of an image) representing a line segment (an image edge), which comprises a plurality of pixels. Thirdly, the Examiner cannot find any where in the claim language "producing an image", the claim recites "producing line segment image data", which Mine teaches as explained above. Furthermore, Mine is producing an image from a camera (col. 7, lines 54-55). Fourthly, Mine et al. stores the edge magnitude and edge direction of an image

(line segment image data) (col. 7, lines 15-18). Mine, discloses producing line segment image data, however, does not explicitly disclose setting a segment length L. Tsukasaki discloses that feature (Abstract, Para. 0026-0028).

Applicant alleges, "Tsukasaki does not cure the deficiencies of [,]" (page 17, line 21– page 19, line 9). The Examiner disagrees. Firstly, the English-language abstract of Tsukasaki teaches edge detection part 20 detects whether or not each pixel is an edge (i.e., plurality of pixels are detected). When it is judged that the pixel is an edge of the 1st – 4th edge direction, the pixel is detected. Extraction part 30 extracts a pixel which is in the edge direction from the pixel detected as the edge by the edge direction part 20 and has the 1st – 4th edge direction crossing each other as a pixel in the closed area and plurality of pixels are extracted as an edge (line segment) of length L (Para. 0026-0028). Secondly, In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Furthermore, Tsukasaki discloses in "Problems to be solved by the Invention" (Para. 0008) that conventional systems that use the matrix-like edge extraction (used by Mine) has a trouble that a 3x3 pixels, i.e. 9 pixels, operation is required for edge detection and detection of the direction of an edge. Moreover, storage capacity also

needed a big capacity and complicated configuration could not be extracted. It is clear that Tsukasaki is curing the deficiencies of conventional systems that use the matrix-like edge extraction such as Mine et al. system, and there is a motivation to combine and the motivation is in the reference (Tsukasaki), by limiting the length of the segment (i.e., edge length) the edge detection process is expedited, the storage capacity needed is reduced, and the accuracy of detection is increased. Thirdly, "assigning a predetermined line segment length" in Mine et al. that uses a conventional 3x3 matrix for edge extraction **would not** render Mine et al. inoperable because Tsukasaki as stated in Para. 0008 is solving the problems associated with such conventional edge detection systems. Fourthly, as shown above, the edge (line segment) in both Mine et al. and Tsukasaki comprises a plurality of pixels, and the proposed combination teaches the invention as broadly claimed.

Applicant repeated the same allegation in claim1, for claims 28, 31, 32, 33, 34, 48, 56, 57, 59, and for claims 16, 23, 26-27, 35-41, 50, 53-55, which have been fully responded to above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 7-9, 11, 12, 19-22, 28-34, 48, 49, 51, 52 and 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view

of Tsukasaki (JP 08-272980). The grounds for rejections stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 1, refer to claim 1 rejection stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein. Mine further discloses, a line segment which comprises a plurality of pixels [the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exit, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3 pixels (col. 8, lines 27-29), i.e., Mine clearly discloses, a line segment (an image edge), which comprises a plurality of pixels].

As to claims 2-3, 7-9, 11-12, 19-22, 29, and 30 refer to claim 2-3, 7-9, 11-12, 19-22, 29, and 30 rejections stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 28,33, and 34, refer to claim 28, 33, and 34 rejections stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein. Mine further discloses, a line segment which comprises a plurality of pixels [the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exit, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3 pixels (col. 8, lines 27-29), i.e., Mine clearly

discloses, a line segment (an image edge), which comprises a plurality of pixels].

As to claims 31, 32, 48, and 57, arguments analogous to those presented for claim 1 are applicable to claims 31, 32, 48, and 57.

As to claims 49, 51, 52, 58, 60 refer to claim 49, 51, 52, 56, and 58-60 rejections stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 56, 59 refer to claim 56, 59 rejections stated in paragraph 5 of the Office Action mailed on 03/07/05, are incorporated by reference herein. Mine further discloses, a line segment which comprises a plurality of pixels [the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exit, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3 pixels (col. 8, lines 27-29), i.e., Mine clearly discloses, a line segment (an image edge), which comprises a plurality of pixels].

6. Claims 16, 23, 26, 27, 35-41, 50, and 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view of Tsukasaki (JP 08-272980) and Huang et al. (5,903,660). The grounds for rejections stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 16, refer to claim 16 rejection stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 23 and 41, refer to claim 23 and 41 rejections stated in paragraph 6

of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 26, and 27 refer to claim 26 and 27 rejections stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 35, refer to claim 35 rejection stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein. Mine further discloses, a line segment which comprises a plurality of pixels [the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exit, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3 pixels (col. 8, lines 27-29), i.e., Mine clearly discloses, a line segment (an image edge), which comprises a plurality of pixels].

As to claims 36, 38, 39, 40, 50, and 53-55 refer to claim 36, 38, 39, 40, 50, and 53-55 rejections stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 37, refer to claim 37 rejection stated in paragraph 6 of the Office Action mailed on 03/07/05, are incorporated by reference herein. Mine further discloses, a line segment which comprises a plurality of pixels [the edge (line segment) in Mine's image comprises of plurality of pixels because an image inherently consists of plurality of pixels and the magnitude and direction detected are characteristics of these pixels. If no pixels exit, there would be no edge magnitude or direction values. Furthermore, Mine clearly discloses that the edge magnitude and direction is detected from a matrix of 3x3

pixels (col. 8, lines 27-29), i.e., Mine clearly discloses, a line segment (an image edge), which comprises a plurality of pixels].

7. Claims 4, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view of Tsukasaki (JP 08-272980) as applied to claim 1 above, and further in view of Lin et al. (6,292,582). The grounds for rejections stated in paragraph 7 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 4 and 10 refer to claim 4 and 10 rejections stated in paragraph 7 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view of Tsukasaki (JP 08-272980) as applied to claim 1 above, and further in view of Tachibana (5,898,440). The grounds for rejections stated in paragraph 8 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 13-15 refer to claim 13-15 rejections stated in paragraph 8 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

9. Claims 17, 18, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view of Tsukasaki (JP 08-272980) as applied to Claim 1 above, and further in view of King et al. (5,926,557). The grounds for rejections stated in paragraph 9 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claims 17, 18, 24 and 25 refer to claim 17, 18, 24 and 25 rejections stated

in paragraph 9 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828) in view of Tsukasaki (JP 08-272980) as applied to Claim 1 above, and further in view of Williams et al. (6,427,030).). The grounds for rejections stated in paragraph 10 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 6 refer to claim 6 rejection stated in paragraph 10 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

11. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mine et al. (JP 09-054828), Tsukasaki (JP 08-272980) and Huang et al. (5,903,660) as applied to Claim 37 above, and further in view of Tachibana (5,898,440).). The grounds for rejections stated in paragraph 11 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

As to claim 42 refer to claim 42 rejection stated in paragraph 11 of the Office Action mailed on 03/07/05, are incorporated by reference herein.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is (571) 272-7413. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SA



SAMIR AHMED
PRIMARY EXAMINER